Remco

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2003 July 3

Jan Goebels, Regional Water Board
Ross Walker, City of Willits

Re: Remco and CEQA

I've examined the Work Plan for Remediation of Source Soils (WP3) and I attended a meeting held by the WERT to discuss it. I do not believe any permit can legally be issued for that Work Plan, or the other two Plans currently proposed by the WERT. This letter explains why, and also raises some other issues that I believe are important in the context of public policy.

I am writing this to both of you because, with the third Work Plan, you are in nearly identical roles with regard to the California Environmental Quality Act (CEQA). I have sensed that I have seemed rude when I was trying not to be, so bear with some things about CEQA that I believe are true. Hopefully you will understand either where I have a misconception or what my real concerns are.

I am glad Mr. Walker is acting as City Manager because that places him in the chain of command to deal with these issues. I mean no insult to Mr. Madrigal because I believe he is identified in official documents only because of his position. Mr. Walker is administratively responsible and is also familiar with CEQA. I mean this document to objectively consider the Remco remediation project and hope either of you will correct me if I misstate something.

General

CEQA applies to every discretionary decision by every public agency subordinate to the State of California that has the potential to affect the physical environment. Every such decision must be supported by an environmental document, unless the decision is one that is specifically exempted. If an environmental document must be prepared, the document may be a Negative Declaration (ND) or an Environmental Impact Report (EIR). The action that takes place because of a decision to proceed is the "project". Projects are so-called because they frequently are private construction projects requiring permitting by a public agency, but CEQA applies to every decision that can affect the environment. In particular, it applies to the decision to grant permits to the WERT to carry out the activities described in the three Work Plans.

Other laws also apply. The Consent Decree (CD) creating the WERT outlines a procedure for remediating the site that is similar to CEQA. The CD also requires the WERT to comply with the National Contingency Plan (NCP). The National Environmental Policy Act (NEPA), which is the Federal equivalent of CEQA, would apply if another US agency had to make a decision, but that does not seem to be the case with Remco. This situation is foreseen in CEQA: agencies are instructed to incorporate CEQA into other procedures

Usually a Mitigated ND (MND) is used instead of an ND because if a project really had no environmental impacts at all, it would probably be in an exempt category. Usually there are impacts, but they are mitigated by changing the project in a standard way- such as paying a connection fee to a water system or using standard construction methods to minimize noise and dust. Conditions of approval are used to modify the project so that the adverse effects are minimized. If the result is no

significant adverse effect on the environment, an MND is the appropriate document. I'll refer to MNDs as NDs for simplicity.

However, all significant adverse impacts must be mitigated to a less than significant level in order to use an ND. If there will be any significant impacts remaining after all the mitigation is implemented, an EIR *must* be prepared. Furthermore, if there is a fair argument that a significant impact is not fully mitigated (i.e., to less than a significant level), an EIR must be prepared.

If an EIR is prepared, the agency may find overriding considerations to approve the project even though permanent adverse impacts to the environment will occur. Also, while only a fair argument is necessary to require preparation of an EIR, a higher standard is required to challenge the conclusions of an EIR. Unless the procedures required by CEQA have been violated in some way, a legal challenge to a Final EIR (FEIR) will usually involve a disagreement between experts.

An EIR primarily serves to disclose the impacts that will occur, how they will be mitigated, and possibly why full mitigation will not be done. Because their purpose is disclosure, EIRs may not defer analysis to future studies (except in the context of a tiered EIR). EIRs can be prepared by anybody, but the agency adopting an EIR as the environmental document must make an independently informed decision to certify it. That is, no matter how an EIR is prepared, the public agency is fully responsible for it. Many agencies choose to prepare EIRs themselves (usually by hiring a contractor) to demonstrate this independence. CEQA allows public agencies to charge the cost of compliance to the applicant, so compliance with CEQA has little or no impact on the agency's budget.

I honestly view CEQA as an aid to public decision-making because, at the end of the process, the decision maker has proof that the best decision was made, provided CEQA is objectively followed. If there is no informed disagreement that a project will have no significant impacts, an ND will suffice. Assuming the decision making body really did objectively analyze the project, there will not be any serious grounds for criticizing a decision that has no significant impacts.

On the other hand, if there is informed disagreement, the EIR is the perfect place to document and answer it. Again, if the decision making body objectively analyzes the project, it will be able to document why its decision is best even considering other points of view. The review period on the Draft EIR (DEIR) essentially makes all parties sign on to the decision, provided the EIR is prepared objectively. The ultimate decision may be disputed, but all parties have been allowed, and required, to make their concerns known.

The only enforcement for CEQA is for some disputing party to file a lawsuit. Courts will defer to the discretion of the Lead Agency, but they require that the proper procedures be followed. There are probably exceptional circumstances, but I believe those procedures are easy to follow, if the public agency is really making an objective, independent decision.

I have used the word "objective" several times because I have observed many agencies try to twist CEQA to justify a preconceived conclusion. On the other hand, sometimes the opposition to a project is effectively irrational- bent only on obstruction and delay. I do not believe either characterization is true for the public agencies or citizens involved with the Remco project. All of the citizens I know primarily want the Remco site to be made safe, and I believe that is the personal desire of all the people working for public agencies too. Although I do not think the public agencies involved have acted correctly in all instances, I believe they have acted in good faith for the most part and are capable of analyzing the project objectively.

The CD orders the WERT to follow the NCP and cooperate with local authorities. The local authority with jurisdiction over ground water is the Regional Water Board (NCRWQCB, or RWB). The pollution produced during Remco operation is primarily in the ground water, so it is appropriate that the RWB oversee the project. In fact, CAO 99-55 orders the WERT to cleanup Remco. It makes sense to me that the RWB be the Lead Agency (LA) for the Remco cleanup project with respect to CEQA.

However, the RWB is a division of the California Environmental Protection Agency (Cal-EPA) and a different division, the Department of Toxic Substances Control (DTSC), is charged with cleaning up sites contaminated by industrial processes. If my understanding is correct, DTSC is responsible for State compliance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Similarly, the US Environmental Protection Agency (EPA) is charged with enforcing the NCP. EPA representatives have publicly stated that EPA is monitoring the RWB. Therefore, I assume that the RWB has made arrangements with DTSC and EPA to act on their behalf in issuing CAO 99-55 and monitoring the actions taken by the WERT.

Adoption of CAO 99-55 is a discretionary act invoking CEQA, with the RWB the LA under CEQA. The LA is responsible for considering all of the environmental consequences of a project, not just those in its usual jurisdiction. Usually, other public agencies are consulted and their recommendations are incorporated into the mitigation measures in the ND or EIR.

The CD identifies the City of Willits as the Lead Agency for purposes of monitoring the WERT's plans for the cleanup. This use of the term "Lead Agency" is separate from the LA with respect to CEQA. The CD specifies a procedure whereby Willits can formally challenge decisions made by the WERT. That is a process apart from CEQA, and nothing in this letter has anything to do with that aspect of the CD.

CEQA recognizes that agencies may share jurisdiction over a project. The soil removal Work Plan (WP3) requires a permit from Willits for demolition. Although WP3 assumes that no permit is required from the RWB, I do not believe that is true. One of the alternatives studied in WP3 would require a discharge permit from the RWB. Furthermore, the work is being undertaken as part of the project defined and authorized in CAO 99-55. Even though the RWB may lack jurisdiction for every alternative to the project, I think it would be appropriate for Willits and the RWB to agree that the RWB would be the LA for WP3. I think that is required anyway because the work is subordinate to CAO 99-55. Also, DTSC is the State agency charged with overseeing cleanup projects. Since DTSC has apparently deferred to the RWB, it is inappropriate for the WERT to seek permission for any part of the overall project elsewhere, except as directed by the RWB.

Conversely, for Willits to act as the LA for WP3 would create unnecessary work and delays. The cumulative impacts of a project must be considered in the environmental document. WP3 may impact future projects and therefore the LA must consider those impacts. Because those other projects are mostly within the jurisdiction of the RWB, it will be more efficient for the RWB to be the LA in consultation with Willits. Again, the cleanup of the Remco site is ordered by CAO 99-55, and WP3 is a part of that project, so the RWB must be the LA.

Incorrect CEQA Application

CAO 99-55 is an example of how I believe the RWB has improperly complied with CEQA. I do not mean to suggest any deliberate wrongdoing. CAO 99-55 orders the WERT to cleanup the Remco site.

It purports to comply with CEQA by citing two categorical exemptions. However, neither of those exemptions may be applied to projects involving construction. Furthermore, a project can be exempt from the requirement to produce an environmental document only if every component part is exempt. For the molasses and sodium polysulfide Pilot Test approved in 2000, an ND was adopted as the environmental document, contradicting the exemptions cited in CAO 99-55.

"Construction" is somewhat ambiguous. I believe that drilling test and monitoring wells is not construction for the purposes of CEQA, but that drilling wells to pump chemicals into the ground water is. I believe the salient difference is the potential to adversely affect the physical environment. That is, drilling wells is always construction, but if the only purpose is to sample groundwater, the environmental impact is insignificant and CEQA does not apply. When the potential for physical impacts exists, the exemptions cited in CAO 99-55 cannot be applied.

When the Pilot Test was approved, the RWB initially recommended adoption of an ND. After hearing testimony, they then reported to the Board that either an ND or EIR would be appropriate. That is a violation of CEQA because discretion is not involved in determining what environmental document should be produced. If there is any doubt that a project, as approved, will have significant adverse impacts on the environment, then an EIR must be produced. Public agencies may not resolve that doubt without preparing an EIR.

My purpose is raising this issue is to suggest that everything the RWB has done so far may be jeopardy. I believe that someone could file suit and bring the Remco project to a halt and create a great deal of confusion how to proceed. CEQA has relatively short statutes of limitations, which apparently preclude a suit challenging CAO 99-55. However, every new project that has any potential for adversely affecting the environment can be challenged. One basis would be that CAO 99-55 envisioned a project without construction and therefore the work in progress, which does involve construction, has no authority. Also, in order to comply with CEQA for new projects, cumulative impacts must be considered. I believe the best way to deal with this situation is to prepare a tiered EIR- which should have been done for CAO 99-55.

Tiered EIRs

Most EIRs are "Project" EIRs. Again, the name arises from their most common use with private construction projects. A project EIR is a single document for a project that requires one approval. A project EIR cannot be used for a project such as CAO 99-55 because more than one approval is required. Instead, a tiered process is necessary. I believe a Program EIR is appropriate for CAO 99-55- but mainly because the alternative types of tiered EIRs seem intended for other, specific purposes.

When a tiered EIR is used, the public agency first approves an overall EIR that analyzes the whole project. In a project such as Remco, work must be performed to obtain the information necessary to fully plan the project. So the first, overall EIR serves as a road map for subordinate projects to obtain information or remediate specific parts of the site. Either NDs or EIRs are used for the subordinate projects. If all the issues were analyzed in a previous EIR, an ND is appropriate. If a significant unmitigated adverse impact is being analyzed for the first time, an EIR must be prepared. But these second tier EIRs need only analyze new issues because they can refer to the first tier or previous second tier EIRs for old issues.

Public Relations

From my experience and observations, the people working for the public agencies dealing with Remco are conscientious and desire to make Remco safe. But mistakes have been made in the past by the

public agencies. Furthermore, the WERT and/or its contractors have acted dishonestly. There is little reason to dwell on the past if the project is moving forward according to CEQA, which will protect the interests of all parties.

Conversely, if a lawsuit is necessary, the past will become relevant not only to show a pattern of non-compliance with CEQA, but also to explain the public concern over the project. Many of us believe that the best solution is to disturb the plume of contamination as little as possible. Furthermore, we believe that if that were done, Remco would fade into Willits's past almost immediately. We believe the tourism and real estate industries would be unfairly impacted by a protracted, vocal battle over Remco and such a situation should be avoided. However, many people blame the failure of regulatory oversight of Remco for their health problems. Those people are determined that Remco be made safe in a way that stands up to objective scrutiny.

The meeting held by the WERT should satisfy nobody that care is being taken with this project. The design of the project is incomplete, with many issues left for future resolution, which cannot be done in either an ND or an EIR. Contractor cost seems to be a greater concern than public safety. Also, there is something fundamentally wrong with representatives of permitting agencies *requesting* conditions that they are *obligated* to impose. The cart seems to be behind the horse, and following CEQA will set the process straight.

Conclusion

Donna Avila and I have made comments on the Soil Remediation Work Plan (WP3) to the WERT. We will also submit them to both Willits and the RWB as a critique of WP3 interpreted as an Initial Study to support adoption of an ND. Frankly, that is to establish a record so that we can file suit to stop all work until all of the applicable laws and regulations are obeyed by the WERT and permitting agencies, if our alternatives fail. We hope that will be a last resort never reached, but the way the WERT has handled the three current Work Plans reinforces our concern that environmental consequences, particularly to public health and safety, are not being properly considered.

As our preferred alternative, we suggest the formation of a Technical Advisory Committee (TAC) under the supervision of the RWB to oversee all future work on the Remco facility site and all other locations that may be contaminated by hazardous waste from Remco operations. Ms. Avila and I wish to be unpaid, non-voting, volunteer members of the TAC (citizen volunteers are allowed for under State law, so this would not be an extraordinary situation). Other members of the TAC would be representatives from the RWB, City of Willits, project engineers, WERT, and other public agencies with an interest in aspects of the project.

The first task for the TAC should be to oversee the preparation of a Program EIR (PEIR). I believe a PEIR would be little different in concept from the Remedial Investigation (RI) prepared by the WERT. However, the WERT failed to complete the RI. The PEIR would complete the RI, for example, by determining the nature and extent of the plume, as explicitly required by the NCP and implicitly required by CEQA (in order to deal with cumulative impacts). The PEIR should also identify those areas where Interim Remediation Actions (IRAs) may be undertaken. That should be done in the PEIR to ensure that short-term goals do not interfere with long-term objectives.

This does constitute a delay in the project, but only because the WERT did not complete the RI, refuses to allow effective public dialogue, and streamlines the project to reduce cost at the expense of public safety. To justify those charges, consider that the consultant hired by the City of Willits stated that hazardous chemicals exist in the ground water north of Highway 20 at the same time the WERT

claimed the plume stopped short of Highway 20. At the public meeting to discuss WP3 (soil remediation), no notes or recordings were being made. Furthermore, the WP3 project was presented to the Willits City Council before anyone had time to examine the plan, and the public meeting was held with no notice to the City and ineffectual notice to the public. The engineering representative repeatedly explained that safety was not designed into the project in order to give the contractor flexibility. That is simply illegal under CEQA because it defers questions about public safety to future studies (by the contractor) and defeats any review of the procedures because they are unknown at the time of project approval.

Once the TAC reviews and completes the RI so it can serve as a PEIR and satisfy the requirements of State law, as well as the applicable Federal regulations, work will resume along the model currently being followed, but with significant differences. Most important, the WERT will no longer be the arbiter of its own work, but will plan work with the TAC (with formal approval by the RWB where necessary).

I strongly suggest that the RWB contract with an engineering firm directly to design the necessary studies to complete the RI in order to prepare the PEIR. I further suggest that contract provide for consultation on subsequent aspects of the project.

I believe that a fair evaluation of the alternatives- something not performed by the WERT- will lead to the cleanup of Remco at the earliest time and with the least public controversy.

Sincerely,

Ken Berry

Remcw

R. Edward Burton

E B C COMPANY

"POLLUTION INTO PRODUCTS"

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Catherine Kuhlman - Executive Officer
California Regional Water Quality Control Board
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July 22, 2003

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JUL 24 2003

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The proposed Resolution RI2003-084 is not entitled to a negative declaration because of the exposure of us who are neighbors will be exposed to various hazards. But more important the Trust has not considered the use of long term Zero Discharge Phytoremediation like our Spaw described on the enclosed sheet.

This SPAW has operated on city water at our home on Sherwood Road for over two years with only Solar Power. No one from the Trust has visited this SPAW or the SPAW at the Willits Wastewater Plant that has operated six years. Janice Gobel from your office and Tracy Barreau from the Department of Public Health have.

It would be a simple matter to install pumps in each of the many wells that have been drilled. Then water then could be piped or hauled to the open SPAW area. The year old redwood seedlings (6" high) are available from the California Nursery in Davis. After one year the two-foot high seedlings can be planted in a Marsh Forest like the one that is also at our home. This Marsh Forest is becoming an attractive Grove while disposing of treated wastewater with no surface discharge.

If the SPAW System is installed, it will help rebuild our economy by creating attractive, productive, fire resistant redwood forests.

You and your staff are invited to visit the SPAW and the Marsh Forest. The following Willits Citizens have read this letter and urge you to visit and review this version of the Best Available Control Technology (BACT)

Sincerely,

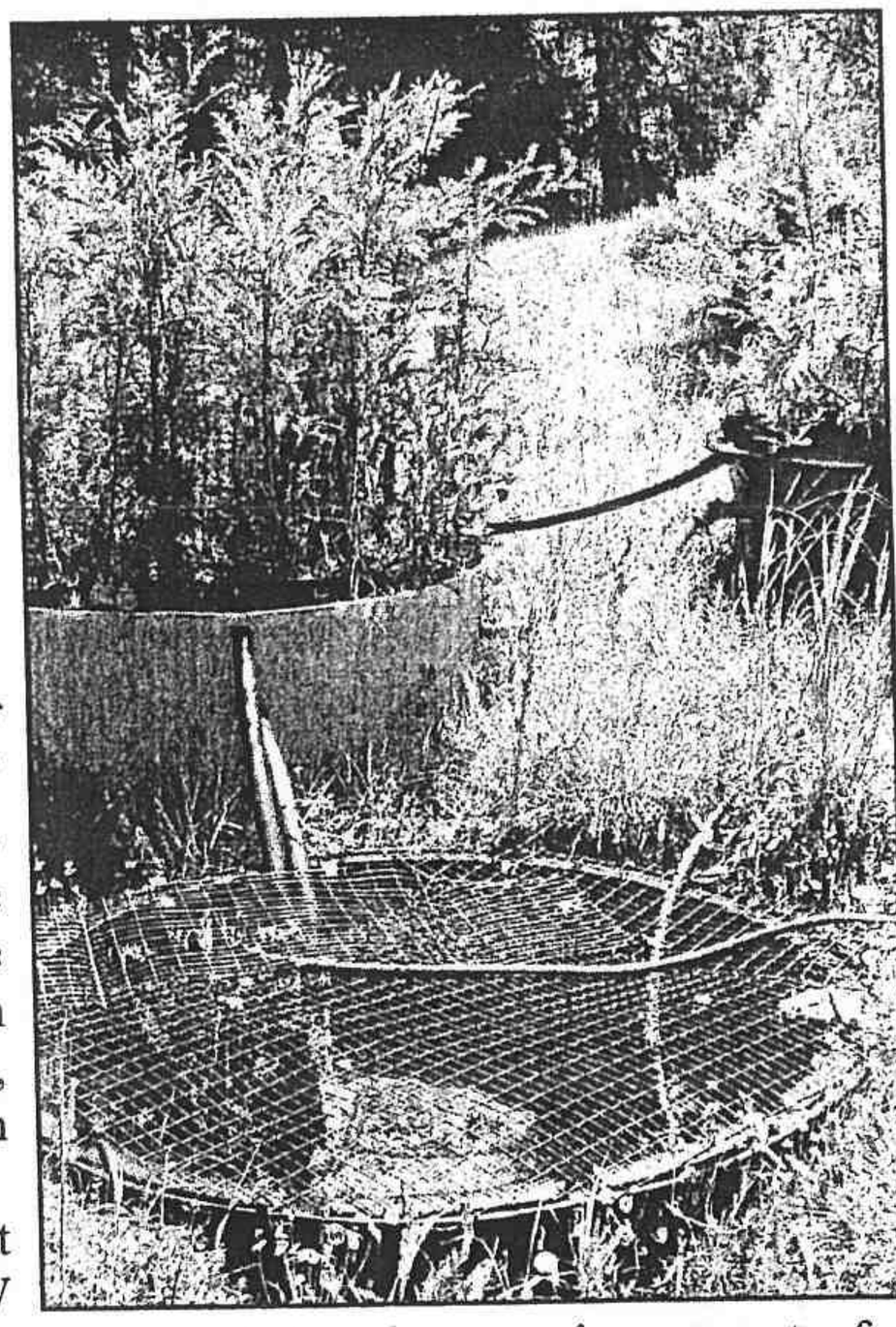
Edward Burton

Ed Burton
EBC Company

SPAW: Solar-Powered Artificial Wetlands

Phytoremediation (biological treatment) of toxic chemicals is a scientifically-proven system of using growing plants to treat toxic wastewater. The plants use the water for growth, extract and convert the toxins, and produce pure water, too.

The Solar Powered Artificial Wetland (or SPAW) does not spray or irrigate the wastewater, eliminating risks from spray drift or aerosols. Instead, the aerobic water is taken up by the roots from a flowing stream, of dissolved oxygen from the algae-growing pond.



A vertical SPAW, like the one operated continuously at the Willits Wastewater Plant (Willits, CA) for the past 6 years, works for applications of limited land area. Since SPAW is solar powered, there is no operating cost. Maintenance consists mainly of weeding the pots. Some zooplankton return to the algae pond where Koi, Carp and Goldfish have been successfully raised.

While it is difficult to get meaningful flow data at SPAW sites because of variations due to wind, rain, temperature, and the size of the redwood seedlings, other studies confi hat redwoods remain active and transpire water, even in winter. Organic or inorganic chemicals dissolved in toxic wastewater are taken up by the redwood seedlings and remain in the plant tissue. Chemicals cannot leave by transpiration. When redwood seedlings reach a suitable size, they can be planted and may grow for a thousand years.

When the redwoods are harvested and milled into lumber, the organic toxins should remain harmless, and the inorganic chemicals will be diluted and scattered. The most important benefits of the SPAW system are zero discharge, zero use of utility electricity, and a cash flow generated from the sale of redwood seedlings.

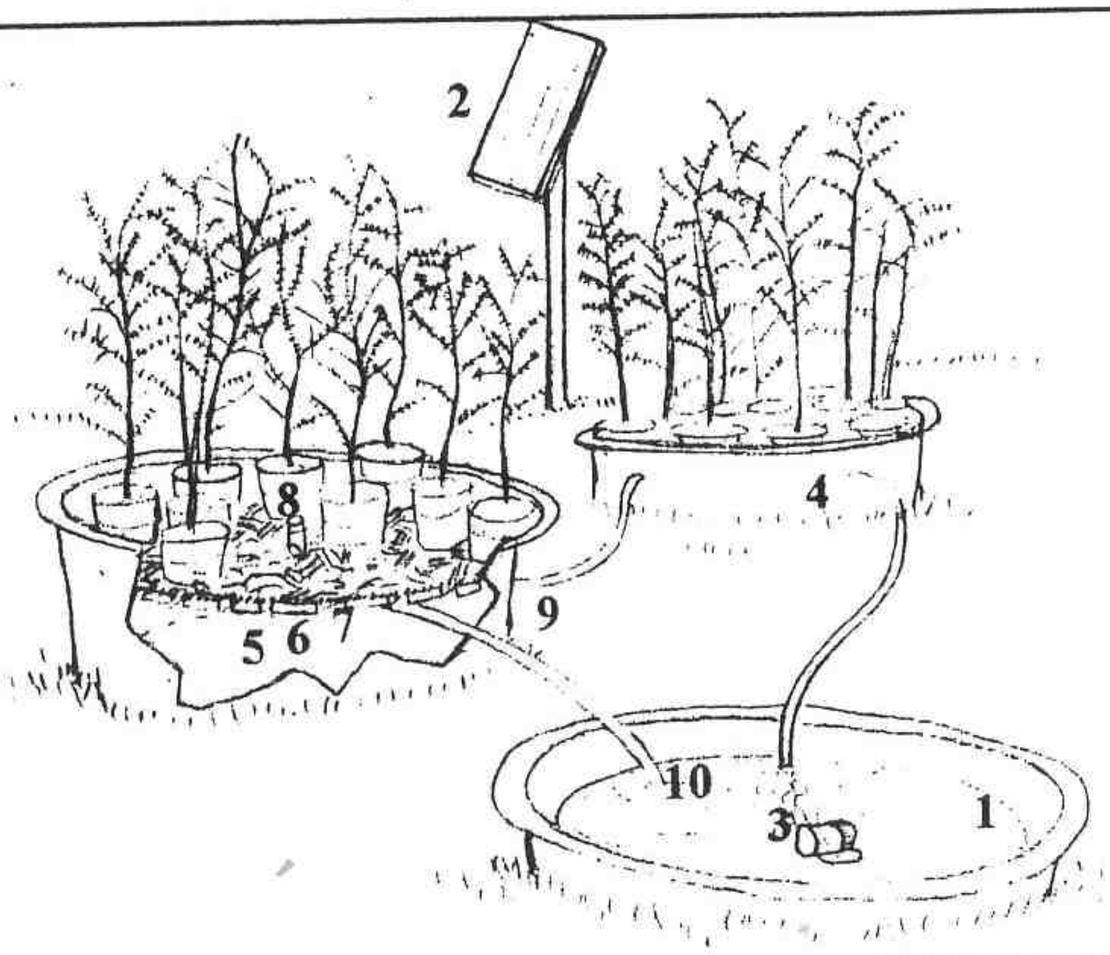
Most studies indicate that soil remediation must go on for several decades. Since nurserymen estimate that water supply is about a third of the cost of ornamental horticulture, operators may lease the growing rights on a SPAW system.

While 3-foot high seedlings have a better chance to survive, there is good demand for healthy redwoods over 2 feet high, particularly for marsh forest.

Calculations demonstrate that SPAW systems can mitigate the impact of a wide variety of toxic wastewater for extended periods at low cost and without electricity.

How SPAW works

The SPAW process is similar in operation to that of a hydroponic system. Toxic water is pumped into the algae pond (1) where single-cell algae absorb sunlight, grow and multiply, absorb dissolved carbon dioxide, and emit dissolved oxygen in the water. The PV modules (2) generate electricity for the pump (3) directly, eliminating batteries and switches. The pumped water enters a tank (4) below a deck consisting of a lower screen (5), a layer of decorticated bark (6), and an upper screen (7). The water exits the overflow standpipe (8) through a connecting pipe (9) into a lower chamber where the process is repeated. In each passage through the bark filters, the algae are filtered out and consumed by the zooplankton (shrimp or snails). Overflow from the last tank returns the water to the algae pond (10).



Remcs

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25 July 2003

The Willits Issue
North Coast Regional Water Quality Control Board
5550 Skylane Boulevard, Suite A
Santa Rosa CA 95403

Dear folks:

Last night I attended two meetings in the Willits. The first meeting I was made aware of by a flyer and a telephone call to see if I was coming up. The second meeting I only learned of after the first meeting was in session and something was said about a time limit because of the second meeting (put on by the Water Quality Control Board).

I protest not being noticed for the second meeting. I certainly have attended and video-taped many of the previous presentations in Willits by the Water Quality Control Board. I have signed up on what I thought were mailing lists and I have written a couple of letters to the Water Quality Control Board about the Willits problem.

I believe that under the Brown Act (or its equivalent) notice must be given 72 hours in advance of a called meeting. Why wasn't I notified? I don't live in Willits so I couldn't go to city hall to see a posting.

My other complaint/comment has to do with the Negative Declaration prepared for the meeting last night. I note that date of the Neg-Dec is 22 July 2003. My first question is who prepared this Neg-Dec? I have some comments regarding the Initial Study/Checklist.

"The project is not within sight of any state scenic highway, and the project would not result in the damaging of scenic resources, as there are no trees, rock outcroppings, and historic buildings within a state scenic highway."

Isn't the on-site proximation to Highway 101 something to consider rather than check off as "No Impact"? Highway 101 runs right by the Remco factory. Although the proposed work is going to be done inside the building, I understand that some of the roof and siding will be removed to accommodate the effort. Traffic on Highway 101 at "commute times" is at a gridlock. Having activity at the Remco factory will certainly cause rubber necking and distraction. I believe this factor should should be given consideration.

"The project site will not change the existing visual character or quality of the site and its surroundings. d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? The project will not create a new source of substantial light or glare. No security lights or other lights are proposed to be installed as a part of the project."

I don't think the actual work aspects of this project were even considered. I didn't see an actual work schedule and description. I didn't see if this project was going to require lighting at night and whether or not it would be seen or be a hazard to traffic flowing by on Highway 101. Were these questions raised in the preparations of the "checklist?"

3. AIR QUALITY – Where available, the significant criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project: a) Conflict with or obstruct implementation of the applicable air quality plan?

It is stated in the checklist that the proposed project is within the jurisdiction of the Mendocino County Air Pollution Control District (MCAPCD) and that the MCAPCD has drafted an air quality plan but the plan has not yet been adapted. The checklist also says that Mendocino County is out of compliance with particulate levels and yet the checklist states the project will not conflict or obstruct the implementation of the applicable air quality plan.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

In the first meeting last night, the dust and contamination was discussed and questioned. My impression of the project process is that they are not considering anything going wrong. That everything will be contained. And yet, again, I have not seen the work process in writing so as to be able to judge if it is appropriate. (I have worked in oil refineries, at the Lawrence Radiation Lab in Livermore, and in hospitals – all of which had extreme hazardous locations where precautions had to be taken to contain contamination. There were procedures to assure that the contaminated materials were kept in the proper place. I find this project particularly similar some work I was involved with in oil refineries and the Radiation Lab. In those cases, a building was provided where you changed out of street clothes and into or out of the required protective clothing. Showers were provided for a thorough scrub-down after leaving the hazardous area and before you put your street clothing back on. The work at hospitals was similar but in that case we were dressing to protect the area rather.)

Does the work plan for this project include such preparations and cautions?

"The project to inject molasses has the potential to cause odors. The injection process also has the potential to generate hydrogen sulfide gas and vinyl chloride (byproducts of volatile organic compounds).

Reading the "Mitigation Measure 3-1" and considering my real-time experience of working in oil refineries and the Radiation Lab, my impression is that not enough preparation is being done to assure no hydrogen sulfide gas escapes. Or, if it does, to rapidly contain it. H2S gas quickly de-activates the sense of smell. In my oil refinery experience we were always to work in pairs and to wear an on-suit H2S detector and to keep a constant monitor on our partner's detector. If the slightest change was noted we

were to immediately leave the area and call the Fire-Safety people.

I don't see anything about such actions for the project. I am particularly sensitive to the matters of exposure to H2S gas because a friend of mine was killed working at a refinery because he inhaled H2S gas from a line that had allegedly been purged and was clean and clear. His working partner only got sick.

I am not going to go through this entire check list and put in my criticism. I think the Water Quality Control Board people need to take this more seriously. I think an EIR is more appropriate so that all the questions about the process can be asked and not simply be checked off as having "no impact."

The people of Willits have had their lives comprised by the carelessness of the operation of the Remco factory. They have been insulted by the attitude by the 'clean up' trust far too many times. The people of Willits have had a tremendous variety of illnesses and disease imposed upon them just for simply living in Willits, possibly working at the Remco factory and being exposed to the noxious gases and chemicals of this plant.

Is there no compassion or understanding for the people who are the victims of this dirty business? I have met many of the people from Willits and have learned of their particular medical traumas that range from respiratory problems to birth defects and to premature deaths. They have suffered with multiple tumors to required premature hysterectomies. Some of the younger people have spoken of not knowing what it is to have good health.

We are talking about at least three or four generations of people who were directly effected by the chemical exposures put on them by the greedy mismanagement of the Remco factory.

In my opinion, the meeting last night should be held again and noticed appropriately.

Yours truly,

Paul D. Stutrud

Willits Citizens for Environmental Justice
67 Franklin Avenue
Willits, California 95490
July 25, 2003

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JUL 29 2003

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California Regional Water Quality Control Board
5550 Skylane Boulevard, Suite A
Santa Rosa, California 95403

Re: Negative Declaration for Abex/Remco Hydraulics Facility
In-Situ Hexavalent Chromium Soil and Groundwater Treatment

Dear Janice Goebel:

We Willits Citizens for Environmental Justice (WCEJ) have reviewed the Public Health Assessment prepared by the California Department of Health Services (CDHS), and the Agency for Toxic Substances and Disease Registry (ATSDR), dated July 21, 2003.

In light of the fact that, on Page 43, CDHS and ATSDR concluded that releases of airborne hexavalent chromium posed a public health hazard in the past (1964-1995), and there is an indeterminate health hazard both currently and in the future from exposure to hexavalent chromium and lead in dust that may be generated during site/building remediation or demolition activities, CDHS and ATSDR have concluded that there is adverse impact proposed by this Negative Declaration (ND).

The WCEJ members have also concluded that the emissions from the dust from exposure to hexavalent chromium and lead poses a public health hazard.

We WCEJ demand that the Regional Water Quality Control Board revoke the proposed ND and instead issue an Environmental Impact Report, which we discussed during the July 24, 2003 meeting at the Willits City Hall.

And finally follow the California Environmental Quality Act "because it is the law"!

Yours truly,

Willits Citizens for Environmental Justice

Donna Avila

Donna Avila, Chair
And some members.

Dorothy McClellan
W. McClellan
Pamela J. Ashcraft
Patricia Samples
Crystal Knapp
Brenda McCann
Bernadette Avila
Daniel Thompson

Remco

R. Edward Burton

E B C COMPANY

"POLLUTION INTO PRODUCTS"

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Catherine Kuhlman
North Coast Regional Water Quality Control Board
5550 Skylane Blvd Suite A
Santa Rosa, Ca. 95403

August 12, 2003

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DSE
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Dear Ms. Kuhlman,

I have your Order NO. R1-2003-085 and have made changes that could be made if our Solar Powered Artificial Wetland SPAW were to be used to remediate the Remco Site.

The difference here is that we are producing a salable product i.e.: two year old established potted redwood seedlings, which have a much better chance of survival in a redwood grove. Particularly if the grove is sub irrigated with wastewater using our Model K-6 Infiltrators.

EBC has been in business since 1952. I have twenty-three US Patents. The Microphor Marine Sanitation Devices I invented and developed are in use throughout the world.

EBC is a vendor of products. We do not have a hazardous disposal permit. Remember Dr. Barry Commner phrase "Pollution is just a Resource out of Place."

Sincerely,

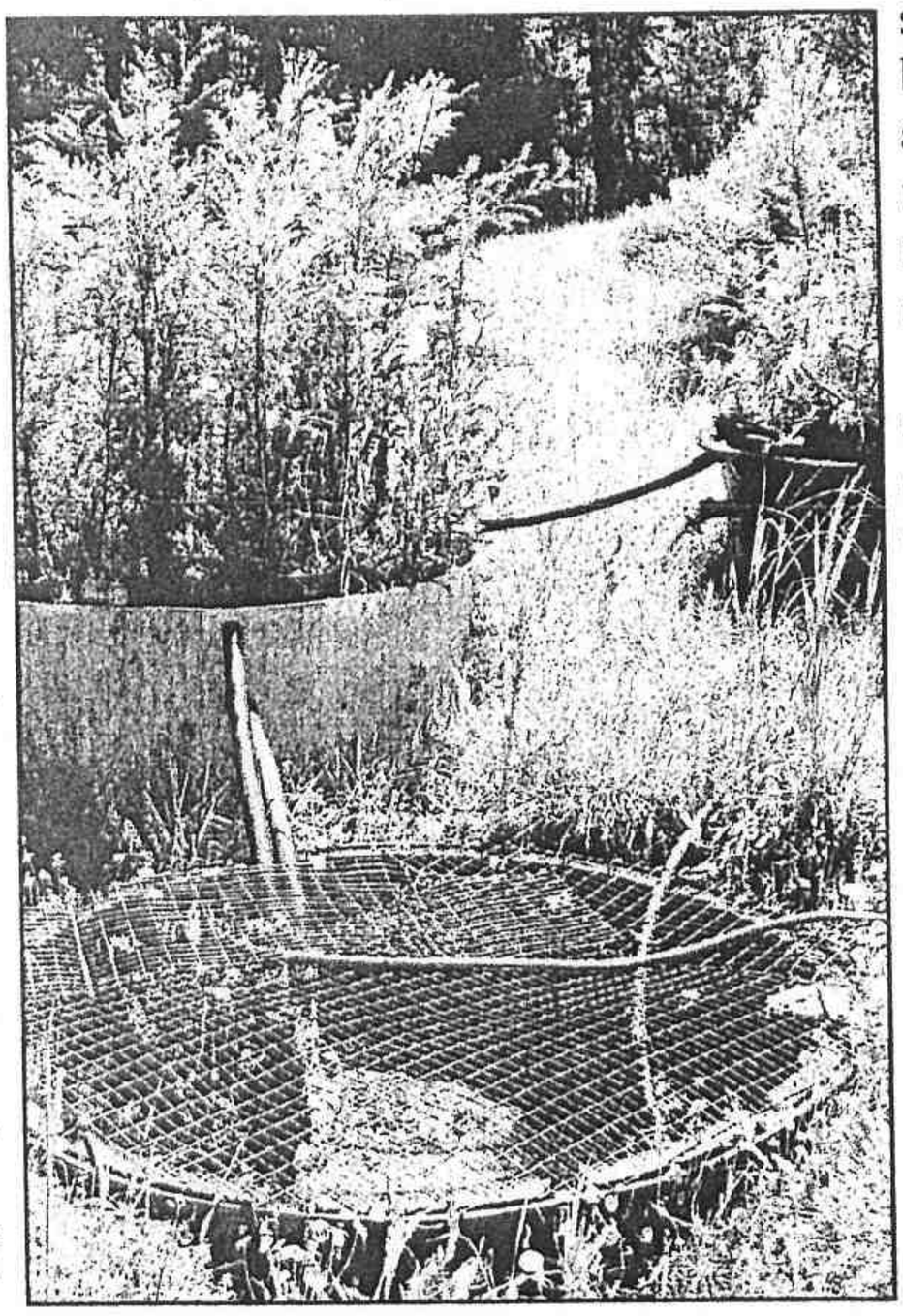
Ed Burton
EBC Company

222 Franklin Avenue • Willits, California 95490

SPAW: Solar-Powered Artificial Wetlands

Phytoremediation (biological treatment) of toxic chemicals is a scientifically-proven system of using growing plants to treat toxic wastewater. The plants use the water for growth, extract and convert the toxins, and produce pure water, too.

The Solar Powered Artificial Wetland (or SPAW) does not spray or irrigate the wastewater, eliminating risks from spray drift or aerosols. Instead, the aerobic water is taken up by the roots from a flowing stream, of dissolved oxygen from the algae-growing pond.



A vertical SPAW, like the one operated continuously at the Willits Wastewater Plant (Willits, CA) for the past 6 years, works for applications of limited land area. Since SPAW is solar powered, there is no operating cost. Maintenance consists mainly of weeding the pots. Some zooplankton return to the algae pond where Koi, Carp and Goldfish have been successfully raised.

While it is difficult to get meaningful flow data at SPAW sites because of variations due to wind, rain, temperature, and the size of the redwood seedlings, other studies confirm that redwoods remain active and transpire water, even in winter. Organic or inorganic chemicals dissolved in toxic wastewater are taken up by the redwood seedlings and remain in the plant tissue. Chemicals cannot leave by transpiration. When redwood seedlings reach a suitable size, they can be planted and may grow for a thousand years.

When the redwoods are harvested and milled into lumber, the organic toxins should remain harmless, and the inorganic chemicals will be diluted and scattered. The most important benefits of the SPAW system are zero discharge, zero use of utility electricity, and a cash flow generated from the sale of redwood seedlings.

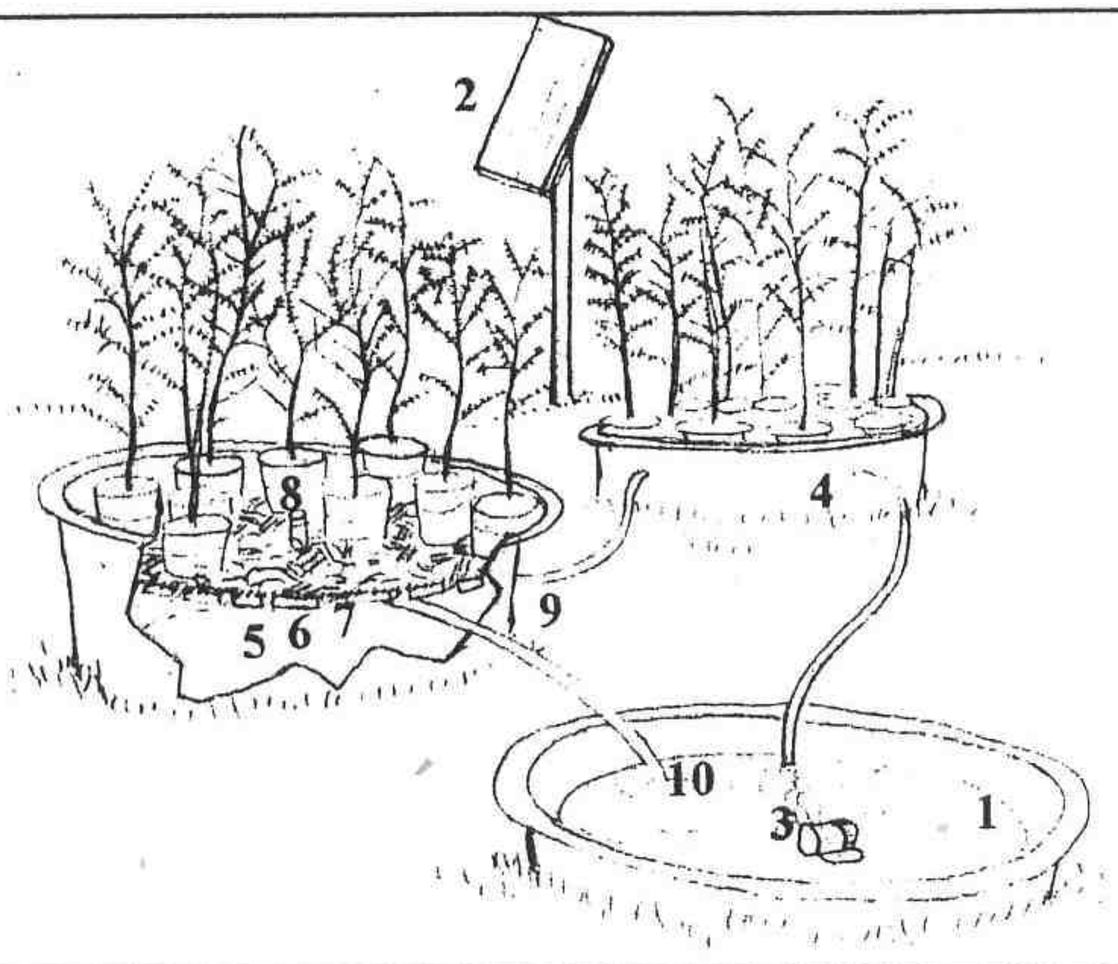
Most studies indicate that soil remediation must go on for several decades. Since nurserymen estimate that water supply is about a third of the cost of ornamental horticulture, operators may lease the growing rights on a SPAW system.

While 3-foot high seedlings have a better chance to survive, there is good demand for healthy redwoods over 2 feet high, particularly for marsh forest.

Calculations demonstrate that SPAW systems can mitigate the impact of a wide variety of toxic wastewater for extended periods at low cost and without electricity.

How SPAW works

The SPAW process is similar in operation to that of a hydroponic system. Toxic water is pumped into the algae pond (1) where single-cell algae absorb sunlight, grow and multiply, absorb dissolved carbon dioxide, and emit dissolved oxygen in the water. The PV modules (2) generate electricity for the pump (3) directly, eliminating batteries and switches. The pumped water enters a tank (4) below a deck consisting of a lower screen (5), a layer of decorticated bark (6), and an upper screen (7). The water exits the overflow standpipe (8) through a connecting pipe (9) into a lower chamber where the process is repeated. In each passage through the bark filters, the algae are filtered out and consumed by the zooplankton (shrimp or snails). Overflow from the last tank returns the water to the algae pond (10).



R. Edward Burton

E B C COMPANY
"POLLUTION INTO PRODUCTS"

707-459-6219
Fax: 707-459-6210

ORDER NO. R1-2003-085
WASTE DISCHARGE REQUIREMENTS
FOR
INTERIM REMEDIAL ACTION TO REDUCE HEXAVALENT CHROMIUM

WILLITS ENVIRONMENTAL REMEDIATION TRUST

The discharger proposes to use a unique form of Phytoremediation to draw toxic groundwater from the ground until the groundwater toxic level complies with the regulations.

The potted redwood seedlings will be grown to a size (usually three feet high) that will assure them a better chance to survive the hot dry summers in our area.

1. The discharger proposes to pump the contaminated toxic water from all of the wells located at and near the Remco Site to Solar Powered Artificial Wetlands (SPAW's) (Described by Figure 1) located outdoors at the Remco Site.

The toxic water is taken up and used by the redwood seedlings to sustain growth. The Trivalent and hexivalent chromium (Chrome), the Volitile Organic Carbon's (VOC's) as well as all other inorganic salts and organic chemicals are taken up by the roots and deposited in the tissues of the redwood seedlings. Some studies show that the living processes in the cells changes the hexivalent to trivalent chromium.

2. There are two versions of the SPAW operating continuously and effectively for up to six years. Model U-3 operates on secondary effluent. Model T-3, the most efficient operates on city water. There is no discharge to the groundwater or surface water from the SPAWS. All of the water is evaporated or transpired as pure water vapor from the algae growing pond. Or, transpired from the mesophyl of the leaves of the redwood seedlings. All of the chemicals remain in the tissue of the growing trees.

A review of the Remco data indicates that the Total Dissolved Salts (TDS) is not likely to exceed 1000PPM, which is the level generally, considered high enough to restrict growth of redwoods. If this level is exceeded, dilution water can be added to the algae pond.

Items 3 – 8 remain the same.

R. Edward Burton

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707-459-6219
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9. The discharger proposes to pump water from all existing sample wells until three consecutive samples test negative, (clean) from each well. i.e.: below the levels set by the authorities. These clean wells will then be closed. This procedure will continue until the area is declared "safe".

The redwood tree tissue will be tested for Chromium and VOC's to determine if the potted trees create any hazard to the people or the environment when they are sold for creating fire resistant redwood groves for Wildlife recreation or Log production. Disposal or sale of the redwoods will be determined by the results of the tests.

10. Remains the same.

11. The discharger has indicated there is no need to inject any chemicals or water into the groundwater. Monitoring will be restricted to tests to determine whether Chromium or VOC's remain.

12. No pilot study necessary.

13 – 19. Remains the same

A. DISCHARGE PROHIBITIONS

1 – 5. Remains the same

B. DISCHARGE SPECIFICATIONS

1 – 5. The Discharger does not propose to inject anything; therefore none of the restrictions apply.

C. PROVISIONS

1 –12. Remains the same

Dangerous Properties of Industrial Materials

Fifth Edition

N. IRVING SAX

Assisted by:

Marilyn C. Bracken/Robert D. Bruce/William F. Durham/Benjamin Feiner/
Edward G. Fitzgerald/Joseph J. Fitzgerald/Barbara J. Goldsmith/John H. Harley/
Robert Herrick/Richard J. Lewis/James R. Mahoney/John F. Schmutz/
E. June Thompson/Elizabeth K. Weisburger/David Gordon Wilson

VAN NOSTRAND REINHOLD COMPANY

NEW YORK CINCINNATI ATLANTA DALLAS SAN FRANCISCO
LONDON TORONTO MELBOURNE

panied by purulent discharge and crusting. If exposure continues, perforation of the nasal septum may result, but produces no deformity of the nose. Chromate salts are recog carc of the lungs, nasal cavity and paranasal sinus, also exper carc of the stomach and larynx. [*14, 23, 95, 62*] Hexavalent compounds are said to be more toxic than the trivalent. [*61, 60, 26, 62, 63, 64*] Eczematous dermatitis due to trivalent chromium compounds has been reported.

CHROMIUM DIFLUORIDE. See chromous fluoride.

CHROMIUM FLUORIDE (III). CrF_3, mw: 109.
THR = HIGH via oral and sc routes. See also chromium compounds. Corrosive.

CHROMIUM FORMATE. Crystals. $Cr(CHO_2)_3$, mw: 187.1.
THR = See chromium compounds.

CHROMIUM METAL AND ALLOYS OF IRON, NICKEL AND COBALT.
THR = A recog carc. [*3, 6*] See chromium and nickel compounds.

CHROMIUM MONOARSENIDE. Gray, hexagonal crystals. CrAs, mw: 126.92, d: 6.35, @ 16°.
THR = See arsenic and chromium compounds.
Fire Hazard: See arsine.
Explosion Hazard: Dangerous; when heated to decomp or on contact with water, steam, acid or acid fumes, will react to produce toxic and flam vapors of arsine.

CHROMIUM MONOBORIDE. Orthorhombic, silvery crystals. CrB, mw: 62.83, mp: 2760°, d: 6.17.
THR = See chromium and boron compounds.
Fire Hazard: See boron hydrides.
Explosion Hazard: See boron hydrides.
Disaster Hazard: Dangerous; on contact with water, steam, acid or acid fumes, will react to produce toxic and flam vapors of boron hydrides.

CHROMIUM MONOPHOSPHIDE. Gray-black crystals. CrP, mw: 82.99, d: 5.7 @ 15°.
THR = See chromium compounds and phosphides.
Fire Hazard: Dangerous; upon contact with moisture, acid or acid fumes, phosphine is evolved. See phosphine.
Explosion Hazard: See phosphides and phosphine.
Disaster Hazard: Dangerous; see phosphides.

CHROMIUM OXIDE III. Syn: *green chromium oxide.* Cr_2O_3, mw: 152.
THR = HIGH via inhal route. An exper (S) carc. [*3, 6*] Reacts violently with ClF_3, glycerol, Li, OF_2. [*19*]

CHROMIUM OXIDE IV. See chromic acid.

CHROMIUM OXYCHLORIDE. Syn: *chromyl chloride.* Dark red liquid, musty burning odor. CrO_2Cl_2, mw: 154.92, mp: −96.5°, bp: 115.7°, d: 1.9145 @ 25°/4°, vap. press: 20 mm @ 20°.
Acute tox data: sc LD_{LO} (mice) = 545 mg kg. [*3*]
THR = HIGH via sc and inhal routes. A strong irr. Hydrolyzes to form chromic and hydrochloric acids. See chromium compounds. Reacts violently with alcohol, ether, acetone, turpentine, NH_3, (Cl_2 + C), F_2, P, PCl_3, NaN_3, S, SCl. [*19*]
Disaster Hazard: Dangerous; see chlorides.

CHROMIUM-2,4-PENTANE DIONE DERIVATIVE.
Syn: *acetylacetonate of chromium.* A solid.
$Cr(C_5H_7O_2)_3$, mw: 349.33, mp: 216°, bp: 340°.
THR = See chromium compounds.

CHROMIUM PICRATE. Solid, $Cr[C_6H_2OH(NO_2)_3]_3$, mw: 739.4.
THR = See chromium compounds.
Fire Hazard: See nitrates.
Explosion Hazard: See explosives, high, and nitrates.
Disaster Hazard: See nitrates.

CHROMIUM POTASSIUM SULFATE. See chrome alum.

CHROMIUM SULFATE. See chromic sulfate.

CHROMIUM TETRACHLORIDE. $CrCl_4$, mw: 193.8
THR = HIGH via inhal and oral routes. See chromium compounds and chlorides. Violent reaction with Na or K. [*19*]

CHROMIUM TETRAFLUORIDE. Brown, amorphous, hygroscopic mass, sol in water with hydrolysis CrF_4, mw: 128.01, d: 2.89, mp: 200°, bp: approx 400° evolving intensely blue flame.
THR = HIGH irr via oral and inhal routes. See also chromium compounds.
Disaster Hazard: Dangerous; see fluorides.

CHROMIUM TRIAMMINO TETROXIDE.
$Cr(NH_3)_3O_4$, mw: 167.
THR = See chromium compounds. Incandesces when heated. Detonates on impact. [*19*]

CHROMIUM TRIOXIDE. See chromic acid.

CHROMOMYCIN A3. Isolated from streptomyces griseus.
THR = HIGH via oral and inhal routes. An exper teratogen. [*3*]

CHROMOUS ACETATE. Red crystals. $Cr(C_2H_3O_2)_2$, mw: 170.10.
Acute tox data: Oral LD_{50} (rat) = 11,260 mg kg. [*3*]
THR = LOW via oral and inhal routes. See chromium compounds.

CHROMOUS BROMIDE. White crystals. $CrBr_2$, mw: 211.84, mp: 842°, d: 4.356.
THR = See chromium compounds.

CHROMOUS CHLORIDE. See chromium chloride II.

ABEX/REMCO Community Meeting – August 5, 2003

California Department of Health Services, Environmental Health Investigations Branch

Your answers to these questions will help us evaluate the community meeting process

- **Was the information presented in the public meeting clear and helpful to you? Please comment.**

In general it was helpful but lacking in specifics: such as; How will the remedial action improve the property of those of us that are neighbors?

- **Did you feel like your questions were answered? Please comment.**

I asked if the toxicity of Chrome 6 is 10, what would be the toxicity of Chrome 3? None of the panel chose to answer, yet this was the main purpose of the remediation. ie. to convert Chrome 6 to Chrome 3. This authority appears to show very little difference in toxicity between Chrome 6 & Chrome 3.

- **How could the meeting have been improved? Please make suggestions/comments.**

The panel members should stand AND speak more slowly. Questions and comments should deal more with the best future actions.

- **Was the information presented in the fact sheet clear and helpful to you? Please comment.**

Yes.

- **Do you need any additional information or have any other comments? Please provide.**

I cannot understand the chemistry that treats VOC's with iron filings. We store gasoline (a VOC) in iron tanks with no effect.